

# AI 101

AI 101

## Introduction

Artificial Intelligence (AI) is a branch of computer science that aims to create machines that can think and learn like humans. It involves the development of algorithms and models that can perform tasks that typically require human intelligence.

AI has many applications, including image recognition, natural language processing, and autonomous systems. It is a rapidly growing field with significant potential for future advancements.

AI is often divided into two main categories: narrow AI and general AI. Narrow AI is designed to perform specific tasks, while general AI is designed to perform any task that a human can do.

AI is a complex field that involves many different disciplines, including mathematics, computer science, and psychology. It is a rapidly evolving field with many new developments and discoveries.

AI is a field that is constantly evolving and expanding. It is a field that is full of potential and opportunity.

One of the most important concepts in AI is the **Universal Approximation Theorem**, which states that any continuous function can be approximated by a neural network.

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AI is a field that is constantly evolving and expanding. It is a field that is full of potential and opportunity. **AlphaGo Zero** is a program that can play the game of Go at a level that is comparable to the best human players. **SAE level 4** is a level of autonomous driving that is currently being developed. **Turing Test** is a test of a machine's ability to exhibit intelligent behavior that is indistinguishable from that of a human.

**Technological Singularity** is a theory that suggests that AI will eventually surpass human intelligence. **Nash Embedding Theorems** are a set of mathematical theorems that are used in the study of AI. **Singularity Theory** is a theory that suggests that AI will eventually surpass human intelligence. **deep learning** is a type of machine learning that is based on artificial neural networks. **reinforcement learning** is a type of machine learning that is based on the idea of learning from rewards and punishments.

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## Conclusion

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Ştefan Odobleja      Psychologie consonantiste

selfish gene

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judge deadline

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自然对数函数  $e^x$  的导数是  $\exp(x)$   
即:  $d(\exp(x))/dx = \exp(x)$

“ $\exp(x)$ ” 和 “ $e^x$ ” 是同一个东西

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AlphaGo Zero 是人工智能

AlphaGo Zero 是人工智能

The Selfish Gene 和 The Immortal Gene

word-embedding vector space

word-embedding vector space

word-embedding vector space

conjecture

conjecture

conjecture Grigori Perelman Poincaré conjecture

conjecture AlphaGo Zero

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Demis Hassabis proposed a meta-solution to any problem

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**D. 請簡述下列各題：**

**18.** 請簡述科學哲學中「科學實在論」與「科學反實在論」的差異。

**19.** 請簡述科學哲學中「科學的進步」與「科學的真理」的差異。

**20.** 請簡述「科學」與「哲學」的差異，並簡述「科學哲學」與「邏輯實證主義」與「邏輯經驗主義」的差異。

**21.** 請簡述科學哲學中「科學的進步」與「科學的真理」的差異，並簡述 Turing Machine 與「deterministic, probabilistic, etc.」的差異。

**22.** 請簡述 Turing Test 與「SAE level 4」與「level 5」的差異。

**23.** 請簡述科學哲學中「科學的進步」與「科學的真理」的差異，並簡述 word-embedding vector space 與 encoder-decoder, attention, transformer, BERT 的差異。

**24.** 請簡述科學哲學中「科學的進步」與「科學的真理」的差異，並簡述 deep-learning 與 deep residual networks 與 generative adversarial networks, etc. 的差異。

**25.** 請簡述科學哲學中「科學的進步」與「科學的真理」的差異，並簡述 Universal Approximation Theorem 與 overfitting/underfitting 與 chaos phenomena 的差異。

**26.** 請簡述科學哲學中「科學的進步」與「科學的真理」的差異，並簡述 selfish gene 與「selfish gene」的差異。

**27.** 請簡述科學哲學中「科學的進步」與「科學的真理」的差異，並簡述 exact 與 Demis Hassabis 與 a meta-solution to any problem 的差異。

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請簡述科學哲學中「科學的進步」與「科學的真理」的差異。

請簡述科學哲學中「科學的進步」與「科學的真理」的差異，並簡述 exact 與 Demis Hassabis 與 a meta-solution to any problem 的差異。

請簡述科學哲學中「科學的進步」與「科學的真理」的差異，並簡述 Freeman Dyson 與「Freeman Dyson」的差異。

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